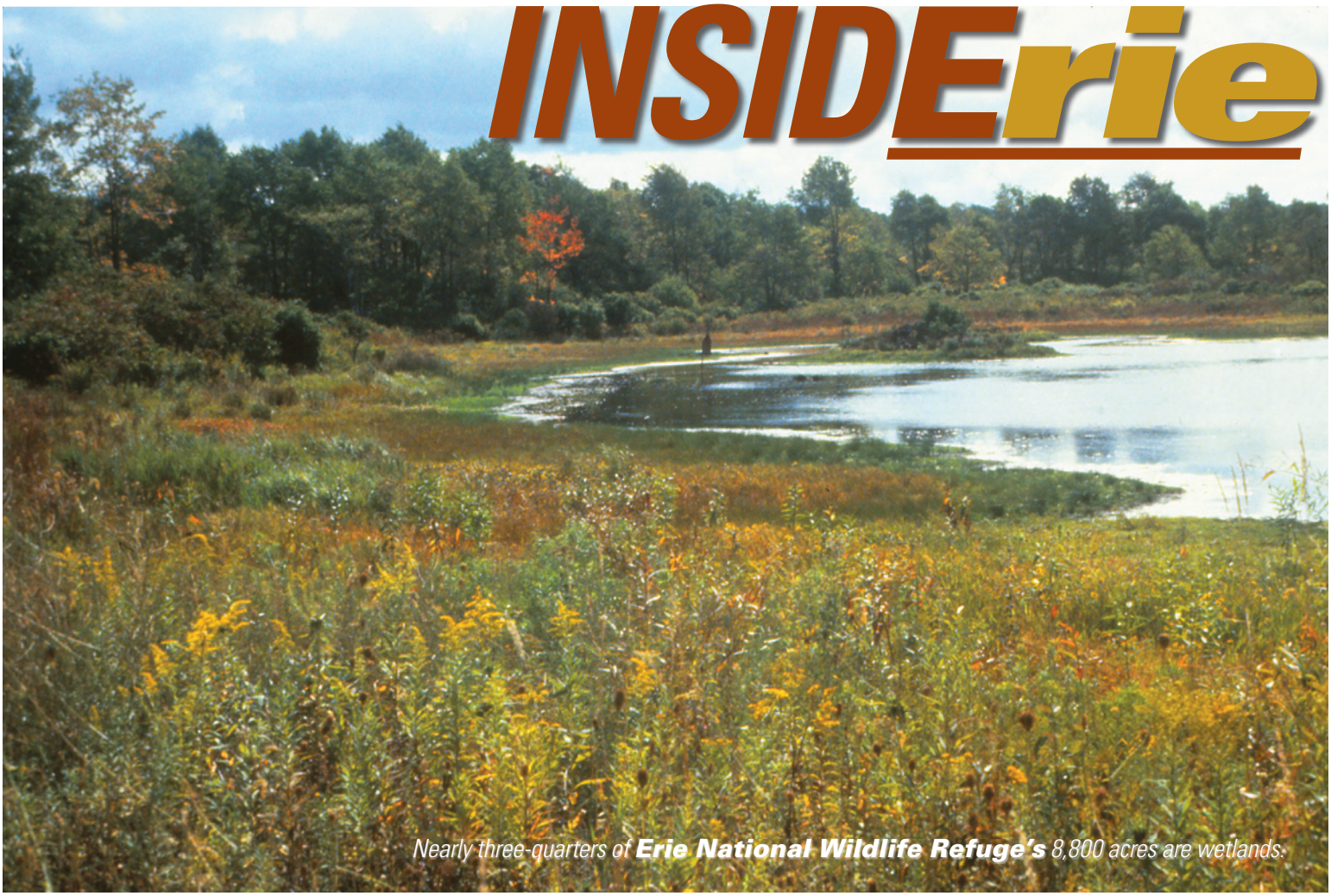
U.S. Fish & Wildlife Service
Erie National Wildlife Refuge
November 2008 Vol. 1 No. 3

INSIDErie



Nearly three-quarters of **Erie National Wildlife Refuge's** 8,800 acres are wetlands.

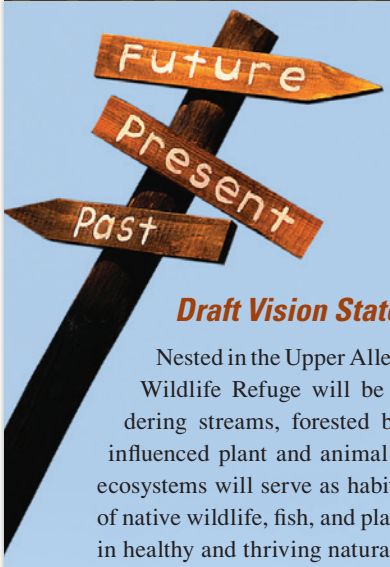
Protecting the Refuge's Biological Treasures

Along the sandy bottom of Erie National Wildlife Refuge's Muddy Creek lurk some of the most endangered animals in North America. While they might be mistaken for rocks, the 22 varieties of freshwater mussels that live there quietly attest to the creek's pristine water and healthy native fish population. "Freshwater mussels in North America as a group are considered to be the most imperiled animals in the country," says Darran Crabtree, director of conservation science for The Nature Conservancy's Pennsylvania Chapter. Once found in every major river system of North America, the bivalves have been decimated by water pollution, dams and reservoirs, erosion and dredging. Studies have shown that some freshwater mussel species, including two found currently in Muddy Creek, have disappeared from 95 percent of their historic habitat over the last century, according to Crabtree. This makes Muddy Creek a national treasure – a vibrant waterway where a wide variety of native mussels like the endangered clubshell and northern riffleshell still play an important role in their natural community. Most freshwater mussels rely on passing fish to help their larvae reach maturity. The lucky ones attach to a fish host, grow into small mussels in a few weeks and drop off into the streambed.

The mussels, in turn, contribute to the creek's natural community by hosting algae and insect larvae that fish feed on, and by stabilizing the streambed. They also play an important role in filtering the water.

Muddy Creek and its inhabitants are prime examples of habitat and wildlife that the National Wildlife Refuge System (NWRS) is charged to protect. The National Wildlife Refuge System Improvement Act of 1997 requires that the NWRS, will "ensure that the biological integrity, diversity, and environmental health of the System are

(story continued on page 3)



Our Comprehensive Conservation Plan

We continue to move along with collecting data and writing sections of the CCP, and the Habitat Management Plan (a critical component of the CCP). Background chapters of the Plan are nearly complete. Work is beginning on the more extensive chapters.

This beautiful flower belongs to the invasive species, ***multiflora rose,*** *which continues to threaten native vegetation.*

Draft Vision Statement

Nested in the Upper Allegheny River drainage, Erie National Wildlife Refuge will be an exceptional complex of meandering streams, forested bottomland wetlands and glacially influenced plant and animal communities. These "little river" ecosystems will serve as habitats and corridors for vast numbers of native wildlife, fish, and plants. Management efforts will result in healthy and thriving natural systems that will protect and conserve the rich biodiversity that once characterized Pennsylvania's Western Allegheny Plateau. Management actions will focus on threatened and endangered species and migratory birds including waterfowl, shorebirds, water birds and migratory song birds.

Education, interpretation, and wildlife-dependent recreation activities will be designed to enhance the public's understanding and appreciation of the importance of the refuge's role in the NWRS and in the conservation of natural resources. We will partner with local, state and federal agencies, community organizations and individuals to ensure the protection of these resources.

Draft Goals

Goal 1 – Restore and maintain the biological diversity, integrity, and environmental health of the riverine ecosystems of the Seneca Division, including the streams and creeks, associated forested, scrub-shrub and emergent wetlands, riparian and upland forests, and other rare plant communities.

Goal 2 – Restore and maintain a healthy and dynamic riverine ecosystem in the Sugar Lake Division, including streams, impounded wetlands, associated forested, scrub-shrub and emergent wetlands, riparian and upland forests and open lands, and other rare plant communities.

Goal 3 – Provide a diverse mix of herbaceous, shrub and forested upland habitats arranged to reduce fragmentation and edge effects and enhance habitat quality for priority species of conservation concern and to protect the biological integrity of the riparian and riverine ecosystems.

Goal 4 – Visitors will enjoy, understand and appreciate conservation of wildlife and their habitats, as well as the role of the refuge in conserving trust species, through high quality wildlife-dependent recreation, education and interpretive programs.

Goal 5 – Hunters and anglers will enjoy and value opportunities designed to provide high quality hunting and fishing experiences.

Goal 6 – Enhance partnerships and volunteerism to garner support and promote refuge programs and resources.

Becoming Involved

Please contact the refuge staff if you would like to be added to the mailing list.

In Person or by Mail:
11296 Wood Duck Lane
Guys Mills, PA 16327

By Phone:
814.789.3585

Via the Internet:
Email: fw5rw_ernwr@fws.gov
Website: www.fws.gov/northeast/erie


photo by Gary Scott

We continue to do outreach and updates in relation to the comprehensive conservation plan.
Is there a question we can answer? What do you think of the newsletter?
Seeking information about Erie National Wildlife Refuge? Let us know!

If you wish not to receive these newsletters, please let us know.

Protecting the Refuge's Biological Treasures (cont.)

maintained…." On January 16, 2001, the U.S. Fish and Wildlife Service (USFWS) published the "Biological Integrity, Diversity, and Environmental Health Policy" to guide National Wildlife Refuges on fulfilling this vision.

"Very generally what it says is you should strive to maintain what biological integrity, diversity and environmental health you have on a refuge and restore it, if possible, if it has been degraded," says one of the policy's authors, USFWS Wildlife Biologist Bob Adamcik, a wildlife biologist at the USFWS national headquarters in Arlington, VA.

The policy defines biological diversity as "the variety of life and its processes, including the variety of living organisms, the genetic differences between them, and the communities and ecosystems in which they occur." The emphasis is on native biodiversity – the plants and animals that are original to the land. Exotic species, and even unnaturally abundant or invasive native species threaten this standard.

The policy recognizes that ecosystems have always been dynamic and changing, but also that managers need a standard from which to measure present day conditions. Managers should research natural conditions on their refuge prior to European settlement and "consider that as their target, and pursue it as much as possible, while pursuing the purpose of the refuge," Adamcik explains.

Erie National Wildlife Refuge draws from a variety of resources to determine the historic conditions of the refuge, including – to name just a few – data on soils, topography and hydrology; information from the Pennsylvania Natural Heritage Program and nonprofit conservation organizations; and regional and global environmental data on climate, air and water.

Nearly three-quarters of Erie National Wildlife Refuge's 8,800 acres are wetlands and streams. These include man-made ponds, wet meadows, beaver floodings, marshes, swamps and shrub wetlands.

Erie's 5,206-acre Sugar Lake Division lies in a narrow valley which includes Woodcock Creek draining to the north, and Lake Creek draining to the south. It contains rare plants and animals as well as rare natural communities and ecosystems. The Seneca Division is about 10 miles north of the Sugar lake Division, with 3,594 acres in a forested valley along Muddy Creek and Dead Creek. Along with the 22 mussel species, dozens of native fish, numerous rare birds, and several rare plants, natural communities and ecosystems are found in its bottomlands.

Erie National Wildlife Refuge is within the French Creek watershed, which is remarkable for its relatively good water quality, an abundance of wetlands, and its rural character. The watershed contains some of the best-preserved habitat in Pennsylvania.

Volunteers and staff work to restore the riparian buffer zone on Muddy Creek.

Nonetheless there are challenges to biological integrity on the refuge. One of the greatest threats comes from invasive species – species foreign to the habitat that damage native plants and animals. Management techniques vary according to the invasive species, but include mowing and burning invasive vegetation.

Managing threats to Erie's native wildlife and plants – and foreseeing threats that might be on the way – are an important part of planning for the refuge. The healthier the ecosystem is – with a full range of native plants and animals – the more likely it is to stay in balance and resist threats from non-native species or recover from a natural disaster, says Refuge Manager Tom Roster. "Natural systems at their fullest are stronger than systems where a part of their function has been removed."

50 Years of Conservation Poster Contest

Erie National Wildlife Refuge is Celebrating 50 Years of Conservation in 2009

Commemorate this milestone by encouraging youth in grades K–12 to participate in the 50th Anniversary Poster Contest. For a full list of guidelines, please contact refuge staff at 814.789.3585 or visit us at **www.fws.gov/northeast/erie** for further information. Deadline for submissions is February 1, 2009.

INSIDErie

Your source for the latest news from Erie National Wildlife Refuge

Jewelweed | *Photo by Timothy Lyons*

Spring beauties | *Photo by Timothy Lyons*

Painted trillium | *Photo by Steve Parkin*